

	Document ID	Issue Date	Pages	Title	Current OR
1	US 20040141471 A1	20040722	18	ADSL communication system having echo canceller and method for downloading filter coefficient of the echo canceller	370/286
2	US 20040120271 A1	20040624	16	Packet voice system with far-end echo cancellation	370/286
3	US 20040114542 A1	20040617	17	Transceiver with accelerated echo canceller convergence	370/286
4	US 20030231617 A1	20031218	17	Method, apparatus, and system for reducing memory requirements for echo cancellers	370/352
5	US 20030206579 A1	20031106	25	Multistage nonlinear echo-canceller for digital communication systems with or without frequency division duplexing	375/219
6	US 20030161277 A1	20030828	16	Method and system for processing telecommunication signals	370/286
7	US 20030031132 A1	20030213	20	Multiplex transmission device	370/236
8	US 20030021389 A1	20030130	20	Impulse response setting method for the 2-channel echo canceling filter, a two-channel echo canceller, and a two-way 2-channel voice transmission device	379/3
9	US 20020064139 A1	20020530	70	Network echo canceller for integrated telecommunications processing	370/289
10	US 20010006510 A1	20010705	9	DSL transmission system with far-end crosstalk cancellation	370/286
11	US 20010002903 A1	20010607	6	DTMF transmission structure of W-CDMA WLL system	370/286
12	US 7103015 B1	20060905	9	DSL transmission system with means for ensuring local echo orthogonality	370/290
13	US 7095720 B1	20060822	12	Trunk level echo canceller test system	370/286
14	US 7085374 B2	20060801	10	Distributed echo cancelling	379/406.01
15	US 7079498 B2	20060718	16	Method, apparatus, and system for reducing memory requirements for echo cancellers	370/286
16	US 7046798 B2	20060516	13	System and method for subliminal time domain duplexing	379/417
17	US 7035205 B2	20060425	15	Method and system for processing telecommunication signals	370/221
18	US 6990083 B1	20060124	12	Method and device for computing echo-cancellation coefficients using FFT	370/286

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19	US 6947773 B2	20050920	11	Method and apparatus for reducing echo feedback in a communication system	455/570
20	US 6928107 B1	20050809	22	Iterative precoding system and method for resource limited data transceivers	375/219
21	US 6868116 B2	20050315	14	Universal telephony tones detector	375/222
22	US 6813351 B1	20041102	10	Method and apparatus for echo cancellation that suppresses echo leak through	379/406.01
23	US 6813311 B1	20041102	9	Non-linear echo cancellation for wireless modems and the like	375/219
24	US 6810025 B2	20041026	6	DTMF transmission structure of W-CDMA WLL system	370/286
25	US 6798754 B1	20040928	14	Acoustic echo cancellation equipped with howling suppressor and double-talk detector	370/286
26	US 6778599 B1	20040817	18	Digital transceiver with multi-rate processing	375/232
27	US 6751313 B2	20040615	12	Method and apparatus for an improved echo canceller	379/406.01
28	US 6751264 B2	20040615	32	Receiver and method therefor	375/267
29	US 6744885 B1	20040601	9	ASR talkoff suppressor	379/406.03
30	US 6741874 B1	20040525	11	Method and apparatus for reducing echo feedback in a communication system	455/570
31	US 6738358 B2	20040518	82	Network echo canceller for integrated telecommunications processing	370/289
32	US 6725066 B2	20040420	5	Method of cancelling echoes in a telecommunications system and an echo canceller for the execution of the method	455/570
33	US 6665402 B1	20031216	8	Method and apparatus for performing echo cancellation	379/406.04
34	US 6563863 B1	20030513	15	Computer modem	375/222
35	US 6542477 B1	20030401	10	Digitally-tunable echo-cancelling analog front end for wireline communications devices	370/286
36	US 6473409 B1	20021029	25	Adaptive filtering system and method for adaptively canceling echoes and reducing noise in digital signals	370/286
37	US 6404887 B1	20020611	18	Intra-call control of ancillary telecommunications equipment	379/406.04
38	US 6396872 B1	20020528	35	Unknown system identification method by subband adaptive filters and device thereof	375/232

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39	US 6094422 A	20000725	8	Echo canceller touch-up period in an echo-cancelling modem	370/286
40	US 6011783 A	20000104	8	Method and apparatus for monitoring echo cancellation performance within a telephone communications network	370/286
41	US 5987098 A	19991116	15	Method and system for sparing echo cancellers	379/3
42	US 5982755 A	19991109	9	System and method for providing high terminal coupling loss in a handsfree terminal	370/278
43	US 5933495 A	19990803	15	Subband acoustic noise suppression	379/406.08
44	US 5856970 A	19990105	14	Multi-channel echo cancellation method and apparatus	370/286
45	US 5835486 A	19981110	23	Multi-channel transcoder rate adapter having low delay and integral echo cancellation	370/287
46	US 5825754 A	19981020	9	Filter and process for reducing noise in audio signals	370/290
47	US 5764753 A	19980609	26	Half-duplex controller	379/406.07
48	US 5668794 A	19970916	33	Variable gain echo suppressor	370/288
49	US 5649012 A	19970715	13	Method for synthesizing an echo path in an echo canceller	379/406.09
50	US 5631900 A	19970520	24	Double-Talk detector for echo canceller	370/287
51	US 5621724 A	19970415	13	Echo cancelling device capable of coping with deterioration of acoustic echo condition in a short time	370/290
52	US 5598468 A	19970128	18	Method and apparatus for echo removal in a communication system	379/406.08
53	US 5559793 A	19960924	81	Echo cancellation system and method	370/286
54	US 5548642 A	19960820	13	Optimization of adaptive filter tap settings for subband acoustic echo cancelers in teleconferencing	379/406.14

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55	US 5511064 A	19960423	9	Speech path switching control apparatus and method for making maintenance of speech possible upon occurrence of fault in echo cancellation	370/217
56	US 5502717 A	19960326	9	Method and apparatus for estimating echo cancellation time	370/286
57	US 5400394 A	19950321	21	Adaptive echo canceller for voice messaging system	379/88.07
58	US 5353280 A	19941004	9	Full-duplex start-up for modems	370/252
59	US 5343522 A	19940830	7	Adaptive sparse echo canceller using a sub-rate filter for active tap selection	379/406.09
60	US 5289539 A	19940222	7	Echo canceller using impulse response estimating method	379/406.09
61	US 5280473 A	19940118	9	Modem with echo cancellation	370/289
62	US 5278900 A	19940111	9	Digital echo canceller comprising a double-talk detector	379/406.08
63	US 5136576 A	19920804	7	Transmission system	370/286
64	US 5132963 A	19920721	12	Echo cancelling device providing adjustment of the echo canceller coefficients during full-duplex transmission	370/286
65	US 5113389 A	19920512	16	Noise cancellation	370/291
66	US 5084866 A	19920128	12	Transversal filter echo canceller	370/291
67	US 5029167 A	19910702	10	Coefficient storage reduction in adaptive filters in echo cancellers or decision feedback equalizers	370/290
68	US 5014263 A	19910507	9	Adaptive echo-canceller with double-talker detection	370/290
69	US 5008923 A	19910416	15	Testable echo cancelling method and device	379/3
70	US 5007047 A	19910409	20	Adaptive rate control for echo cancelling modem	370/286
71	US 4998241 A	19910305	7	Echo canceller	370/288
72	US 4995031 A	19910219	27	Equalizer for ISDN-U interface	370/286
73	US 4987569 A	19910122	22	Fast training echo canceller	370/292

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74	US 4972436 A	19901120	30	High performance sigma delta based analog modem front end	375/247
75	US 4920530 A	19900424	7	Adaptive time-discrete filter for forming a cancelling signal from synchronous data symbols	370/291
76	US 4823382 A	19890418	14	Echo canceller with dynamically positioned adaptive filter taps	379/406.08
77	US 4805215 A	19890214	16	Adaptive echo canceller with sparse dynamically positioned taps	379/406.08
78	US 4792940 A	19881220	6	Automatic retrain method for a full duplex modem having an echo canceller and an equalizer	370/292
79	US 4742510 A	19880503	10	Near and far echo canceller for data communications	370/290
80	US 4736414 A	19880405	15	Method of and device for the digital cancellation of the echo generated in connections with time-varying characteristics	379/406.06
81	US 4713803 A	19871215	5	Bidirectional digital transmission system with echo-cancellation	370/288
82	US 4615025 A	19860930	7	Data transmission system	370/287
83	US 4605826 A	19860812	17	Echo canceler with cascaded filter structure	370/290
84	US 4581492 A	19860408	9	Digital duplex communication system	370/286
85	US 4577309 A	19860318	12	Method and apparatus for measuring distant echo delay in an echo cancelling arrangement	370/286
86	US 4571720 A	19860218	11	Method and apparatus for reducing the convergence time of an echo canceller	370/291
87	US 4570036 A	19860211	9	Digital duplex communication system	370/286
88	US 4549048 A	19851022	8	Digital echo canceller	370/289
89	US 4527020 A	19850702	24	Echo canceller for a long-distance telephone network	379/406.06
90	US RE31253 E	19830524	13	Echo cancellation in two-wire, two-way data transmission systems	370/286
91	US 4131767 A	19781226	12	Echo cancellation in two-wire, two-way data transmission systems	379/406.06
92	US 4087654 A	19780502	7	Echo canceller for two-wire full duplex data transmission	379/406.08
93	US 4074086 A	19780214	10	Joint adaptive echo canceller and equalizer for two-wire full-duplex data transmission	379/406.08

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